with least trouble: this is the regimen to be advised, notwithstanding it may be vastly disgusting to you yourself, and, at the same time, opposite to that which has succeeded in other cases; this experimental regimen is the only one suitable to the stomach of the patient. Still, one should take idiosyncrasies into consideration. It is well to add that in chronic affections of the digestive tube, light potages, rich or plain, are indicated; that white meats and farinacious vegetables, such as potatoes, are preferable to colored meats and herbaceous vegetables. If the patient says nothing on this point, you had better bear in mind these general rules.

Two Cases of Exsection of the Ribs, and the Removal of Foreign Bodies from the Chest.

BY H. H. TOLAND, M. D.

Although the operation of exsection of the ribs was performed by Galen, by Lavachar in 1775, and by Larrey in 1807, yet it was almost forgotten in 1818, when Richerand operated upon an officer of health who had cancer of the thorax. In this case several inches of the middle part of four ribs were removed, as well as a portion of the diseased pleura, sufficiently extensive for the pulsations of the heart to be observed. The prospect for the recovery of this patient was, for some time, very flattering, but the disease returned before the wound cicatrized, and ultimately proved fatal. Since that time the operation has been performed successfully by Blandin, Roux, Mott, Warren, Velpeau and others; although the great number of fatal cases that have occurred proves conclusively that it is not unattended with danger. Velpeau thinks that the excision of the true ribs must always be regarded as a serious operation, and should never be performed unless the disease, besides being circumscribed, is entirely local, or by its presence threatens to produce serious consequences. When diseased ribs can be removed without wounding the pleura, much less danger should be apprehended than when that membrane must necessarily be divided.

Not having the facilities for reference afforded by other large cities, I have not been able to ascertain how many operations of exsection of the ribs for the removal of foreign bodies from the cavity of the thorax have been performed. In California only one to my knowledge has occurred except the case given below. This one, however, has been so extensively published that it is unnecessary to advert to it more particularly. If the cavity of the chest be exposed by a wound of the parietes the lung contracts and its function is suspended; great difficulty of breathing is experienced, the face generally becomes livid, the pulse small, frequent and irregular, and death may result either from inflammation, or from the sound lung being unable to perform the function of both. When the cavity of the thorax is not only penetrated, but the substance of the lung itself is wounded, the case presents a more serious aspect; for, in addition to pneumothorax, and an accumulation of blood in the cavity of the chest, the consequence of hemorrhage into the bronchial tubes of

the sound lung are to be apprehended. Bloody expectoration generally occurs, and blood, mixed with air, escapes from the wound. "When the lung is wounded it must suffer a complete contraction." Although not permitted to enter externally, air will escape from the branches of the trachea that are divided. Besides the symptoms given above, resulting from wounds of the lungs, air frequently escapes into the cellular tissue, under the integuments, producing emphysema. This results from the external opening being either valvular or having been closed. Pneumothorax may be distinguished from an effusion of blood into the cavity of the pleura by the resonance being increased; and emphysema from any other difficulty by the crackling sensation imparted to the fingers by the distended cellular tissue. To avoid the occurrence of the distressing and often fatal consequences resulting from injuries of this character, the wound should not be closed, and if closed, it should be speedily opened; and in cases when the lungs are injured without the existence of an external wound, one lung should be made to permit the accumulated fluid to escape, it being much more safe to risk the consequences of profuse and uncontrolled hemorrhage than to subject the patient to the distress and danger resulting from effusion of both air and blood into the pleural cavity; for, if the patient escape death from imperfect oxygenation of the blood, he will most probably perish from subsequent inflammation.

CASE FIRST.

Benjamin Johnson, of Nevada, California, was shot with a six inch revolver at the distance of five feet, June 3d, 1857. The ball fractured the seventh rib, at the angle, and about nine inches from the center of the sternum, on the right side, escaping near the spinous process of the first lumbar vertebræ. Although he bled profusely from the wound, no blood was expectorated, which renders it probable that the ball did not pass through the lung. No greater difficulty of breathing was experienced than must necessarily result from an effusion of blood into he cavity of the pleura: his constitutional symptoms were not of so aggravated a character as would have resulted from a wound of the lung by such a weapon. At about the expiration of the second week a large quantity of decomposed blood mixed with pus escaped. For three months the purulent discharge was profuse, accompanied with fever, by which he was so much exhausted that he was unable to leave his room, and from that time until he came to San Francisco about half a pint of offensive matter escaped daily. No diminution had occurred for several months, notwithstanding the cavity was injected by his attending physicians, and proper constitutional means employed for the purpose of accomplishing that object. This induced me to believe that some foreign substance must have remained in the cavity of the chest, and, by irritating the pleura, caused the profuse secretion of pus, and prevented the wound from closing. He being willing to submit to any course of treatment that afforded a prospect of relief, I determined to enlarge the external wound, which alone would enable me to make such an exploration of the sac as would be necessary to ascertain its contents, and, if any foreign bodies were discovered, to effect their removal.

March 11th, 1858—assisted by Dr. James Blake, of Sacramento, Dr. Traver, of Red Bluffs, and Dr. Hewer, of San Francisco. Chloroform was administered, and an incision made in the direction of the seventh rib six inches and a half in length extending from the wound downward and forward to within two inches and a half of the median line. The rib, at the point of fracture, was united both to the sixth and eighth ribs by a fibro-cartilagenous substance which was divided, and, after detaching it from the soft parts, it was elevated at the anterior extremity and severed with bone forceps. It was then raised and detached from the pleura, and four inches removed with the same instrument. The pleura costalis being extensively exposed, an incision three inches long was made from the original opening towards the sternum, when at least a quart of offensive pus escaped. It flowed from the wound with a gurgling sound at each inspiration which expelled the atmospheric air and pus with which the cavity was filled. When a director was passed through the external opening, an extensive cavity was discovered. The lung was greatly collapsed, being at least three inches from the parietes of the chest laterally, and the director passed posteriorly about seven inches before coming in contact with any obstacle; denuded bone could then be distinctly felt which corresponded with the position of the posterior portion of the same rib, but, being apparently immoveable, and the patient considerably exhausted, the wound was dressed and morphine administered.

On the second day, assisted by Dr. Hauer, the patient was placed on his right side, over an ordinary wash basin, and the lint removed, when about a pint of pus escaped, in which we found several portions of cloth, which corresponded with the clothes he wore when the wound was received, and which are represented in the accompanying plate.

After the pus escaped, a director was passed into the cavity about six inches when it came in contact with a denuded bone, which being moveable was brought near enough to the external opening to be removed with polypus forceps. It was a portion, most probably, of the seventh rib, which had been forced into the chest by the ball, and had remained there from the time the injury was received. A denuded bone could still be felt, and, from its position, was unquestionably one of the ribs which was injured by the ball, and had changed its direction so that it escaped so far from a transverse line and so much below the place of entrance. On the succeeding day some of the wadding of his vest was found by the nurse in the purulent matter that was discharged.

For several days his pulse was full, strong, and from 110 to 120 per minute. His thirst was excessive, and he vomited occasionally. Although his respiration was accelerated, he had neither cough nor bloody expectoration. By the administration of the ext veratrum viride, and the free use of ice water, the excitement gradually subsided, and the discharge diminished until not more than a gill escaped daily, and in twenty days his situation was more favorable than when the operation was performed. The patient had always complained of pain and tenderness when pressure was made over the posterior part of the seventh rib, which corresponded with the point where carious bone could be felt with the director. Being anxious to relieve him as soon as pos-

sible, on the 30th of March, assisted by Drs. Hewer, O'Brien and Williamson, an incision was made through the integuments, over the posterior portion of the seventh rib, five inches long, and about four inches of that bone removed with the trephine, commencing within an inch of the transverse process of the dorsal vertebra and extending beyond the tubercle. The two first sections were healthy, but the third was surrounded with pus, and was both soft and denuded. After the fourth application of the trephine, and the rib anterior to the tubercle being healthy, the pleura, which was thickened and indurated, was divided so as to admit the finger. Its diseased condition imparted the sensation through the director which induced myself and the physicians present to suppose that several inches of the rib were diseased, when really not more than an inch was deprived of vitality, which was, however, sufficient to justify the operation. After the introduction of a tent and the application of the water dressing, the patient was placed upon his back to allow the pus to escape readily through the posterior opening. Finding, subsequently, that the secretion flowed as freely from the anterior wound, the posterior was allowed to close, and only three weeks were required for its complete cicatrization. Less constitutional disturbance resulted from this than from the previous operation. The discharge has diminished regularly, and now (April 30th) not more than an ounce escapes daily. His general health is rapidly improving, and the lung has expanded so much that the respiratory murmur can be heard over both the anterior and posterior portions of the chest, but not laterally. To prevent the wound from closing, and allow the purulent secretion to escape as readily as formed, (which is really the only method that can be adopted by which the cavity can be emptied by the expansion of the lung, the depression of the parietes of the chest, and the process of granulation,) a silver tube has been introduced and secured by a bandage, which will be worn until the discharge ceases entirely, and from his present situation it is highly probable that only a few weeks will be required to restore him to perfect health, and enable him to resume his former avocation. This tube was invented by Mr. Lindoff, who was my assistant at the U. S. Marine Hospital, in 1856, to fulfill the same purpose in a case of empyema then under treatment. Its use was attended with so favorable a result in that case that it will be represented in the plate.

CASE SECOND.

Charles M. West, in May, 1857, was engaged with others in hunting for Messrs. Andrews' surveying party on the Wacuma Creek, in the southern portion of the State, and while approaching the camp one night he was mistaken for an Indian, and received three gun-shot wounds. One ball entered the shoulder, one passed through the upper part of the thigh, and a third fractured the sixth rib, near the angle of the right side, penetrating the parietes of the chest, passed posterior to the sternum, and escaped about an inch from that bone, on the left side. As both the fifth and sixth ribs were carious, it is probable that the ball, after penetrating the latter, passed between that and the one above, injuring the peritoneum of both in its course so much as to induce sufficient inflammation to destroy their vitality. Not having exam-

ined the patient for some months after he received the injury. I am unable to say to what extent the pleura was wounded, or whether a sufficient quantity of air was admitted to produce a collapse of the lung so as to interfere seriously with respiration. The hemorrhage, which at first was profuse, his friends controlled by filling the wounds with resin obtained from the pine trees in the vicinity. The following day he was placed upon a horse, and succeeded in traveling one hundred and fifty miles to the Tejon Reservation, where he remained under the care of the surgeon of the Fort until August of the same year. Although greatly debilitated, he then traveled on foot to San Pedro, and arrived by water in San Francisco on the 17th of November, 1857. At that time, both the fifth and sixth ribs were carious, the latter from the point at which the ball entered to the cartilage, and the former to the extent of four inches. Believing, from his exhausted condition, that the system would not be able to resist the debilitating influence of the irritation and discharge necessarily resulting from so extensive a suppurating surface, sufficiently long for the carious bone to be thrown off by its unaided efforts, I determined to remove all the diseased bone, and relieve him at once from that source of constitutional disturbance.

On the 3d of December, assisted by Drs. Fitch and Hewer, an incision was made from the wound on the right side, near the angle of the sixth rib, and extended to within one inch of the median line. The soft parts, though extensively divided, were so much swollen that some difficulty was experienced in exposing the ribs sufficiently to divide them anteriorly without wounding the pleura, which was, however, accomplished by elevating them with tooth forceps until the section was completed. They were then dissected carefully from the pleura, and removed with bone forceps, the sixth at the point of fracture and the other near the junction of the healthy and diseased portions. A detached bone more than an inch in length, and no doubt a portion of the sixth rib, was removed without difficulty with common forceps. The pleura costalis was thickened and indurated and presented an extensive suppurating surface. The wound was filled with lint, and the water dressing applied. It, although formidable, produced but little constitutional derangement, which, no doubt, resulted from the system having become tolerant to local irritation from its long continuance, which accounts satisfactorily for the extraordinary and rapid recovery of patients from surgical operations in cases where extensive local disease has existed for many months. The wound healed as rapidly as possible under the circumstances. His appetite returned, and in a few weeks his general health was as good as before the operation.

I do not consider that any apology is necessary for the publication of these cases. They were both successful, and may serve as a precedent for those who may hereafter be called upon to treat injuries of a similar character. Johnson must have died without surgical assistance, as neither the cavity that existed in the chest could have been obliterated, nor the wound have healed as long as the carious rib and the foreign substances remained. West would most probably have sunk under the irritation and profuse discharge that had existed so long, and which must have continued for an indefinite time if he had relied upon the unaided efforts of the system for relief.

Contributions to the Treatment of Croup.

BY DR. LUZSINSKY, DIRECTOR OF THE CHILDREN'S HOSPITAL OF MARIAHILF, VIENNA.

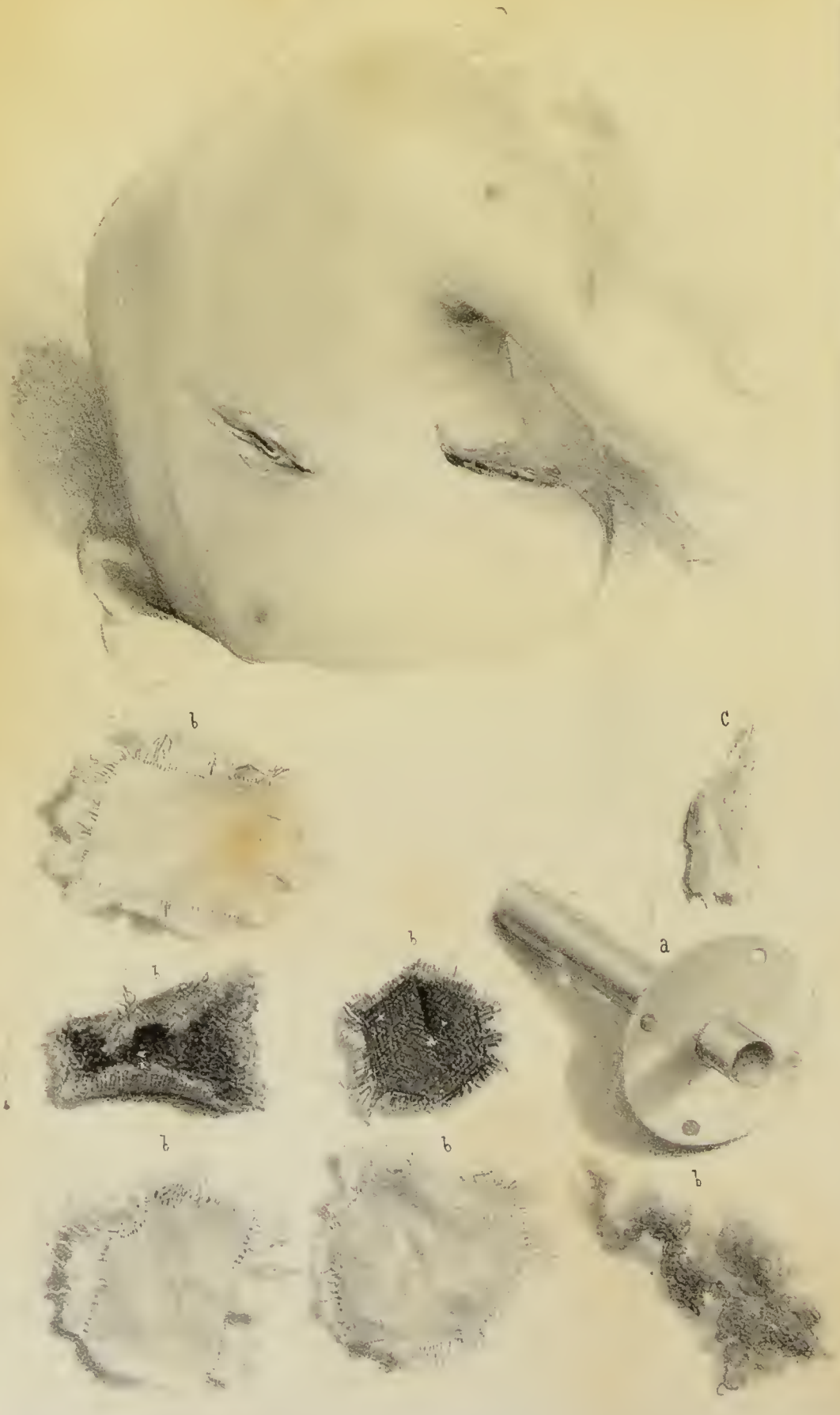
Translated from Journal fur Kinder Krankheiten, by Dr. Maleech.

There are few diseases which the physician is called upon to treat that are more prevalent than angina membranosa, or which engages his attention to a greater degree; for the reason that there are few diseases more terrible and dangerous to the infantile sufferer than this—seizing the child in the bloom of health, and too often terminating rapidly its young career of life. As yet, science has done but little to ameliorate the symptoms and lessen the danger attending this formidable disease; with its earnest endeavors and the torrents of literature called forth by the fatality of the complaint, she has, as yet, gained but a trifle, but, on the other hand, we may safely say that our confusion in regard to the treatment and pathology of this malady daily increases. A careful examination of this disease, in the forms usually presented, has led me to the belief that error in its diagnosis is not uncommon, two other forms of disease being often mistaken for that of true croup: I refer to laryngeal catarrh and laryngeal spasm, separate or combined, occurring in the same person. Strict systematizers are prone to regard these latter and somewhat related affections of the larynx, (so often running into each other) as but stages of angina membranosa, which appears to me most erroneous, and diagnosis on those premises cannot terminate other than with disadvantage in a practical point of view.

Careful search for the causes of our present confusion touching the disease in question will develope the fact that it is not the different phases which the complaint takes on that enhances our troubles, for those phases are sufficiently definite, but it lies rather with the various authors who have attempted its solution, and who have not given that due regard to its pathological anatomy which it deserves, or who do not manifest that close circumspection in their works so necessary to the clear demonstration of an abstruse subject. One author teaches that croup is simply a spasmodic affection of the larynx. He will place the same title on laryngisimus stridulus or asthma laryngeum; he will find in his autopsy false membrane similar to that of croup, (though not the real false membrane of this disease,) and yet assert, in cases where those products are met with, that it resulted from spasm alone. These are the doctrines taught by Haherkopff. Others, again, see croup in every cough, while others still, equally learned, do not attribute to these conditions the slightest importance, but wait for further symptoms to justify the diagnosis of croup.

From that inattention to pathological anatomy which is too common, we have a cause for many of the discrepancies of authors, and while they have boasted of brilliant success in the treatment of croup, they could, in truth, speak only of sorrowful results.

In the Austrian journals (Jan. 1855, p. 6-7,) I have published the results of my studies on angina membranosa, its reality, appearance and treatment, and will here quote but a small portion of that paper for the purpose of connecting my subsequent investigations:



Johnson's Case

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West's Case